

TEST AVAILABLE COPY**REMARKS**

The Final Office Action mailed July 21, 2003 (Paper No. 8) has been carefully reviewed and the following is made in response thereto. Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Summary of the Examiner Interview

Applicant's undersigned representative met with Examiner Nguyen on Friday, February 27, 2004, at her office in Arlington, VA. Kurt Dahlberg, the inventor of the instant application, joined the interview telephonically.

During the interview, Applicant's representative showed the Examiner the following samples:

Samples 1 to 3: Current supplement products available on the market based on the prior art.

Sample 4: One example of the supplement products described in the instant patent application.

Samples 5 to 7: Examples of mushroom spawn and casing spawn.

Sample 8: A sample of BIODAC, one possible ingredient in the polysaccharide mushroom compost supplements described in the instant patent application.

Sample 9: A sample of calcium alginate beads like those used in the Romaine *et al.* patent cited as prior art. This sample represents the inventor's best attempt to make the equivalent of Romaine's casing spawn, although he did not have the proper equipment to get exactly the right bead size.

Using the samples above for demonstration purposes, Mr. Dahlberg explained that the mushroom compost supplements of the present invention are not the same as mushroom spawn or casing spawn as disclosed and claimed by Romaine *et al.* (U.S. Patent No. 4,803,800). He further explained that the easiest way to make the distinction between spawn and supplement is that spawn is the equivalent of a plant seed while supplement is the equivalent of a plant fertilizer. Furthermore, Mr. Dahlberg explained that mushroom spawn and casing spawn are always

colonized by the mycelium of the mushroom begin cultivated. In contrast, mushroom compost supplements never contain mushroom mycelia.

Status of the Claims

Claims 1-16 and 18-36 are currently pending.

In an effort to further clarify the claimed invention and advance prosecution, claim 1 has hereby been newly amended to recite that the claimed enriched mushroom compost supplement “does not comprise mushroom mycelia.” Claim 1 is the only independent claim currently pending in the instant application. Support for the newly added phrase can be found throughout the as-filed application. See, for example, page 1, lines 19-26, where it teaches that mushroom spawn includes “mushroom mycelia”, and page 4, line 2 to page 7, line 9 which teaches that a mushroom supplement does not include mushroom mycelia.

The Rejection under 35 U.S.C. § 102(b)

Claims 1-7 and 36 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Romaine *et al.* (U.S. Pat. No. 4,803,800). Applicants respectfully traverse the rejection and request reconsideration for the following reasons.

All of the discussion pertinent to this rejection as set forth in the Amendment After Final Under 37 C.F.R. 1.116 filed November 24, 2003, are incorporated herein in their entirety.

As discussed above, claim 1 has hereby been newly amended to recite that the claimed enriched mushroom compost supplement “does not comprise mushroom mycelia.”

As discussed in detail in previously-filed responses and during the recent Examiner Interview, the invention disclosed and claimed by Romaine *et al.* (U.S. Patent No. 4,803,800) is directed to mushroom spawn. Romaine *et al.* state that “the term “spawn” refers to a nutrient substrate colonized by mycelium” (column 2, lines 21-22). One skilled in the art recognizes that the word “spawn” is synonymous with “fungal mycelium”. See, for example the attached definition of “spawn” from The Concise Oxford Dictionary of Botany, page 383 (M. Allaby, editor, Oxford University Press, 1992). Romaine *et al.* further state that the “substrate capsule of the present invention may thus be regarded as a synthetic analog of the prior known grain substrate for spawn or compost substrate for CACing material” (column 12, lines 27-30).

Romaine *et al.* teach that “CACing” refers to “compost-at-casing” which is “compost colonized by mushroom fungus and then applied to the colonized compost” (column 2, lines 38-45).

We further note that each and every one of the independent claims of the Romaine *et al.* patent (*i.e.*, claims 1, 23, 70 and 92) require inoculation with “filamentous fungi” (*i.e.*, mycelia). Thus, Romaine *et al.* clearly distinguish their spawn invention from the instant claimed mushroom supplement that is not colonized by mushroom mycelium.

Nothing in the specification or claims in the instant application refers to causing the Polysaccharide Mushroom Compost Supplement to become colonized by mushroom mycelium. A person of ordinary skill in the art of growing mushrooms would not equate a nutrient substrate colonized by mycelium (*to wit*, a mushroom spawn) with a mixture of dry ingredients (*to wit*, a mushroom compost supplement). Claim 1 of the present invention has hereby been amended to clearly differentiate the claimed supplement of the instant claimed invention from the spawn compositions disclosed and claimed by Romaine *et al.*

For the above reasons and in view of the amendment to claim 1, applicant respectfully requests that the Examiner withdraw the rejection.

The Rejection of Claims under 35 U.S.C. § 103(a)

Claims 8-35 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Romaine *et al.* (U.S. Pat. No. 4,803,800). Applicants respectfully traverse the rejection and request reconsideration for the following reasons.

Applicants’ comments above with respect to the Romaine *et al.* patent are incorporated herein by reference. Respectfully, the improved mushroom spawn methods and compositions disclosed by Romaine *et al.* do not teach or suggest the instant invention. There would have been absolutely no motivation to modify the teachings in Romaine *et al.* to arrive at the claimed invention because a person skilled in the art of mushroom cultivation would not add mushroom mycelia to the mushroom supplement of the instant claimed invention. For the reasons stated above, withdrawal of the rejection is requested.

Conclusion


In view of the foregoing remarks, Applicants respectfully request withdrawal of all outstanding rejections and early notice of allowance to that effect. Should the Examiner believe that a telephonic interview would expedite prosecution and allowance of this application, she is encouraged to contact the undersigned at her convenience.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No.50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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Date: August 9, 2004



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which contains a very small flora scattered amongst the islands of the oceans surrounding Antarctica. There are only 2 endemic genera (*see* endemism), 1 of which is disjunct between several islands. Despite the great distance separating the islands, and their varying latitudes, there is a notable floristic constancy. A characteristic vegetation is tussocky grassland, dominated by *vicarious species of *Poa*. *See also* floral province and floristic region.

south-west Australian floral region Part of Good's (1974) Australian kingdom, which is a very rich floral region with a high degree of *endemism, in many respects rivalling that of the Cape region of S. Africa. The same families are prominent in both floras and they have many growth forms in common. *See also* floral province and floristic region.

soya bean *See Glycine*.

spadix A spike of flowers on a swollen *axis.

Spanish chestnut *See Castanea*.

Spanish grass *See Stipa*.

Sparassis (family Sparassidaceae, order *Aphyllphorales) A genus of fungi in which the *hymenium is borne on the under-side of 1 or more flattened, petal-like lobes. *S. crispa* (brain fungus, cauliflower fungus) forms *fruit bodies that are large (20-50 cm across), pale yellow or buff, and densely branched with numerous flattened, wrinkled lobes. It is found at the base of conifer trees or tree stumps.

spathe In monocotyledons (*Monocotyledoneae), a large *bract subtending an *inflorescence.

Spathodea (African tulip tree; family Bignoniaceae) A *monotypic genus (*S. nilotica*, formerly *S. nilotica*) of evergreen trees which have *pinnate leaves and large red flowers in *racemes. The *pod splits into 2 parts. The seeds are winged. They are planted for their attractive flowers and occur in tropical Africa.

spatulate Having an end that is broad and flattened, like a spatula.

spawn A fungal *mycelium. Among *mushroom growers, a block of manure or other suitable substrate bearing a growth of mycelium of **Agaricus bisporus*, used to start a new culture of mushrooms.

special adaptation *See* general adaptation.

special creation The belief that the origin of life and the diversity of life result from acts of God whereby each species was created separately. *Evolution is implicitly rejected as the explanation of these phenomena.

specialization A degree of *adaptation of an organism to its environment. A high degree of specialization suggests both a narrow *habitat or *niche and significant *interspecific competition.

speciation The separation of populations of plants and animals, originally able to interbreed, into independent evolutionary units which can interbreed no longer, owing to accumulated genetic differences. In *cladistics, the origin of one or more new species occurs inferentially by cladogenesis.

species (sing. and pl.) Literally, a group of organisms that resemble one another closely: the term derives from the Latin *speculare*, 'to look'. In taxonomy, it is applied to one or more groups (populations) of individuals that can interbreed within the group but that cannot exchange *genes with other groups (populations), or, in other words an interbreeding group of biological organisms that is isolated reproductively from all other organisms (*see* biospecies). A species can be made up of groups in which members do not actually exchange genes with members of other groups (though in principle they could do so), as, for example, at the two extremes of a continuous geographical range. However, if some *gene flow occurs along a continuum, the formation of another species is unlikely to occur. Where barriers to gene flow arise (e.g. physical barriers, such as sea, or areas of unfavourable habitat) this reproductive isolation may lead by either local selection or random *genetic drift to the formation of morphologically distinct forms termed races or subspecies. These

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